# SBC State of California Frame Relay/ATM Outage Summary 8-3-2004

### **Outage Summary**

On 8/3/2004 at 06:58, the State of California ATM node in Chico was isolated due to the loss of the DS3 trunks to San Francisco and Sacramento. A total of 369 PVCs were impacted by the outage. HHSDC and Teale reported the loss of connectivity to 80 sites and 37 sites respectively. 911 was impacted with the loss of ALI links to 21 PSAPs. The outage was caused by gunfire damage to the fiber cable carrying the DS3 trunks to the MCI LATA 2 Point of Presence (POP) in Redding. Service was restored on 8/4/2004 at 05:40 when the replacement of the damaged section of cable was complete.

### **Timeline of Events**

8/3/2004

- 06:58 CMAC identifies significant event within the 911 ALI network. ASI NOC receives indication of the loss of both DS3 trunks to Chico.
- 07:15 State of California Health & Human Services Data Center reports ~ 80 sites down. Teale Data Center reports 37 sites down.
- 07:20 Conference bridge established.
- 08:15 Trouble isolation indicates that two OC12 point to point systems between SBC RDNGCA11 central office and the MCI POP RDNGCABZW01 are impacted. Alarm analysis indicates a likely fiber trouble.
- 08:30 MCI and SBC begin dispatching field personnel to test fiber.
- 09:15 MCI technician uses OTDR to identify a possible trouble ~ 3.5 km from MCI POP.
- 09:30 SBC field personnel begin driving/walking the fiber route (~ 6 miles) looking for obvious physical issues (e.g. cut cable due to backhoe, auger, fire, etc).
- 10:30 No obvious damage to fiber cable along roads or in residential areas. SBC technicians use OTDR at RDNGCA11 and identify the trouble at 3.9 miles from central office.
- 11:00 Two technicians begin walking the fiber route about 3 miles out from central office looking for damage.
- 12:00 The general area around where trouble is being tested to is  $\sim$  .5 miles off of roadway in heavy scrub oak, manzanita, and poison oak. Area is not accessible by vehicle. No apparent damages spotted.

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- 13:00 Technicians begin to take apart fiber splices coming in from both directions and use OTDR to further isolate the trouble.
- 14:00 Trouble is isolated to a couple of aerial spans of cable.
- 15:00 Technicians notice that the CATV cable had metal sticking through their sheath from an apparent gun shot. A ladder was used to reach the fiber cable. Gun shot damage was found on the SBC inter duct and cable in heavily wooded area.
- 15:30 Line crew brings fiber cable to site of damaged section. Initial plan was to place a single temporary section of fiber cable to restore service.
- 16:30 Upon lowering the cable from the adjacent poles, the technicians noted another section of fiber that was damage by gunfire as well. It was decided to permanently repair section with new strand of fiber cable and interduct. A total of 1200' of cable and interduct need to be replaced.
- 24:00 Line crew completes hanging new cable and interduct. Splicing crews begin to splice in the new cable. The splices are performed aerially due to lack of vehicle access for fiber trailer.

#### 8/4/2004

- 05:40 Splicing on fiber pairs 7-12 complete and systems testing good with NOC. Service begins to restore immediately.
- 06:10 All State of California services are confirmed operational at Teale and HHSDC.
- 06:45 Splicing complete on pairs 1-6. Redundancy is restored to both Sonet rings.

## **Discussion**

MCI's RDNGCABZW01 Point of Presence (POP) is it's only access in LATA2 that is capable of delivering DS3 bandwidth. There is only one existing cable route between the MCI's POP and the SBC RDNGCA11 central office. Two additional routes are in varying stages of approval (Right of Way, Easements, environmental impact studies, etc).

#### **Path Forward**

Continue to pursue licensing and approval for additional routes. Estimate 6-12 months for approval & installation.